National Assessment of Water Availability and Use

"When the well runs dry, we know the worth of water" - Benjamin Franklin, Poor Richard's Almanac

The Problem

The availability and use of freshwater is central to the health and growth of the Nation's economy and its environment. The public and decision makers are more concerned about water availability now than at any time in the last half century.

The Government Accountability Office (GAO) reported in 2003, "National water availability and use has not been comprehensively assessed in 25 years." Much has changed over that time: competition for water has increased, new sources and technologies have been developed, and resources have been depleted in some areas. Better knowledge is needed to help citizens, businesses, and government plan for the future.

The USGS

Providing unbiased science is a hallmark of the U.S. Geological Survey (USGS). The agency's long-term monitoring of water resources provides the science needed by the public and by decision makers to assess water availability and use, to understand drought and its impact on water supply, and to manage and use our water resources responsibly.

The Program

At the request of Congress, the National Assessment of **W**ater **Av**ailability and Us**e** (WAVE) program will begin in fiscal year (FY) 2005 with $1.2 million for a pilot study in the Great Lakes. The President's FY 2006 budget requests additional funds to extend the effort to the western United States.

The WAVE program will provide citizens, communities, and natural-resource managers with:

- a clearer knowledge of the status of the Nation's water resources (how much water we have);
- trends over recent decades in water availability and use (how water availability is changing); and
- an improved ability to forecast the availability of water for future economic and environmental uses (how much water will we have).

The program also will develop and document new approaches to assess surface-water and ground-water conditions, such as use of coupled ground-water and surface-water models for basin-scale analysis, and new methods to estimate consumptive use for key sectors of water withdrawal.

Reports from the studies will include historic trends and annual updates of river basin inflows, outflows, and reservoir storage; summaries of ground-water reserves and storage changes; improved measurements and estimates of water-cycle components such as ground-water recharge; identification and estimates of undeveloped potential resources (saline water, irrigation return flows, etc.); and estimation of water withdrawals from surface water and ground water by key sectors (irrigation, domestic use, industrial use, etc.).

Products will be web-accessible and enable a broad range of users to extract information relevant to their needs.

At full scale, the program would include a national synthesis to provide an overview of the status and trends of the Nation's water resources useful to policymakers, public officials, and the general public.

The Pilot Study

The Great Lakes pilot study will determine the best ways to evaluate the resource and deliver accurate and timely information to planners and policymakers working at local, regional, and national levels. The program will add other major water-resources regions in the future as funding permits. The program is funded at $1.2 million in FY 2005 for the Great Lakes pilot.

More Information

- Report to Congress: "Concepts for National Assessment of Water Availability and Use," USGS Circular 1223: http://water.usgs.gov/pubs/circ/circ1223/
- Contact: Bill Alley, Chief, USGS Office of Ground Water (email: walley@usgs.gov; http://water.usgs.gov/ogw/)